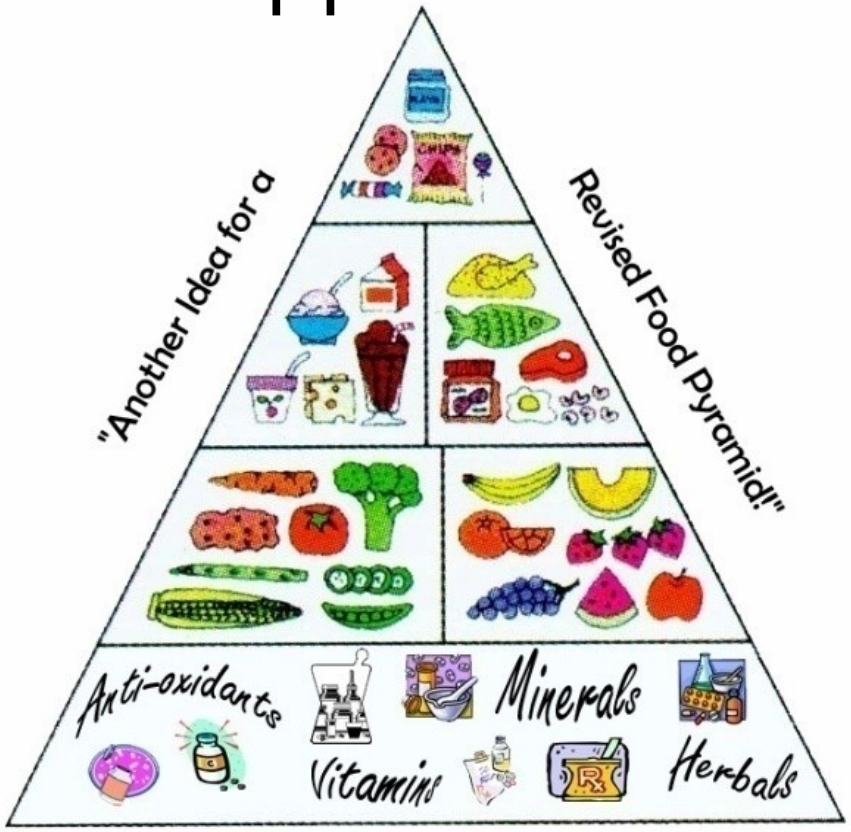
Soldiers & Supplements

Be a SMART supplement shopper



MAJ Trisha B. Stavinoha

MS, RD, CSSD, CSCS

trisha.brooke.stavinoha@us.army.mil

Supplements = Business

Supplements do not have to prove they work, they just need to convince you they work

http://www.youtube.com/watch?v=3mfQTiumsO4

http://www.youtube.com/watch?v=1g_WDX2Ilhc

Supplement Facts

- $25 billion per year industry (2008)
- Over 29,000 dietary supplements available
- Over 500 dietary supplement manufacturers
- Over 200 countries
- 1-50 ingredients

upplement Facts Servings Per Container: 112

	Amount Per Serving	% Dail
agnesium (as magnesium oxide)	15 mg	
nc (as zinc aspartate)	25 mg	
pper (as copper gluconate)	2 mg	
ptimone 5™:		
Five Phase Hormone Optimizing Blend:	903 mg	
Tribulus *terrestris* (standardized to 40% furastanol saponins), Fenugreek 4:1 extrac (seed), tongkat ali 20:1 extract (root) (*Eurycoma longifolia Jack*), red clover extract (4 isoflavones), Chrysin, Kudzu root (Pueraria lobota) (40% isoflavones), DIM (diindolyme *Avena sativa* 10:1 extract (aerial parts), zinc (as zinc aspartate), *Pygeum africanum* extract (25% total sterol) (bark), stinging nettle leaf 4:1 extract, beta sitosterol, saw palmetto berry extract (90% total sterols & free fatty acids), Bioperine® (black pepper		
nd Messenger™ Hormone Amplifiers:		
Receptor Signal Transduction Blend:	625 mg	
Flaxseed [fatty acid profile (linolenic 8.0%, linoleic 2.5%, oleic 2.5%)], glycine, L-ar magnesium oxide, dipotassium phosphate, DL-malic acid, L-methionine, cordyceps (*Cordyceps sinensis*), NADH		

Of Soldiers Surveyed 2006-2007

- 53% take a supplement at least once a week
  - 53% male, 57% female
- 23% take 5 or more per day
  - 24% male, 16% female

- Women take supplements the most... men take the most supplements

Supplement Shopping Worksheet

- Why do I want to take a supplement?
- Am I doing all I can without the supplement to reach my goals?
- What am I going to take? What are the ingredients?
- What does the label say I should take? Is this correct?
- What is the risk(s), if any, of taking the supplement?
- Does this supplement claim to do what I want and what are the claims based on?
- How much does it cost? Is it worth it?
- How long do I plan on taking it? How long does it recommend?
- Is it safe to take?
- Does it interact with prescribed medications?

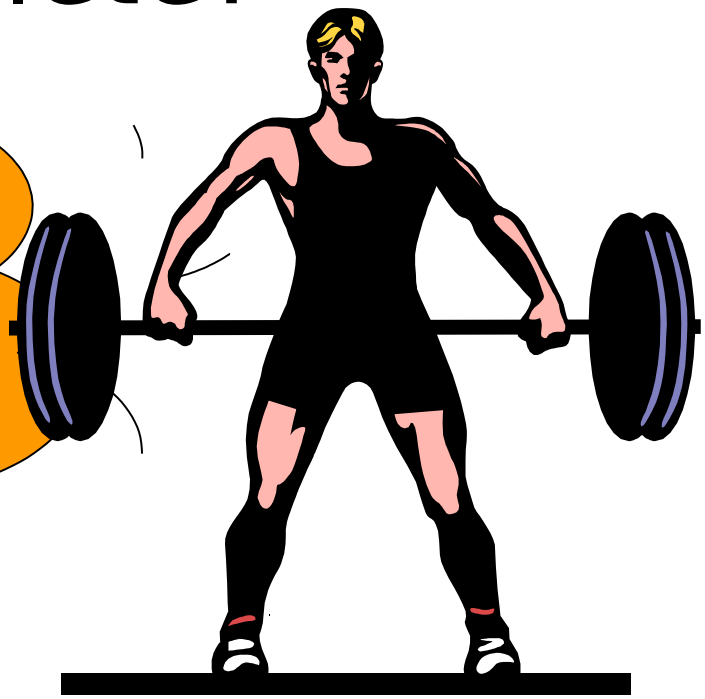
What to consider when evaluating a supplement

- Why do I want to take a supplement?
  - *Lose weight, gain weight, more energy, prevent a disease, be healthier, be happier, perform better?*
  - *Can a supplement really fix this?*

- Am I doing all I can without the supplement to reach my goals?
  - *Have you changed your diet?*
  - *Have you altered your exercise routine?*
  - *Are you done growing?*
  - *Don't expect immediate results*

What do you need to do to become a better, faster, stronger athlete?

Train, eat a performance diet, rehydrate, rest



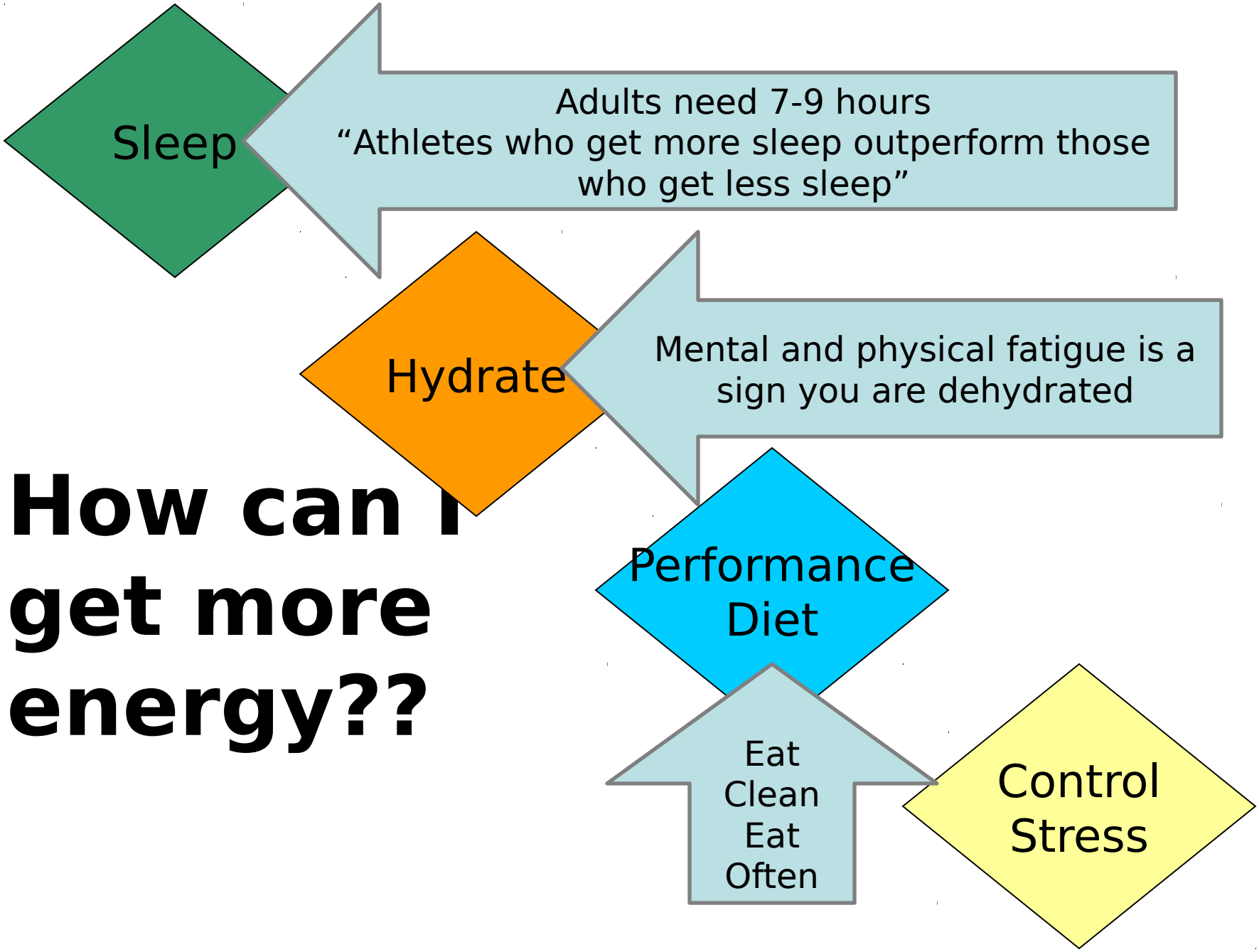
Supplements should compliment your training diet, not replace your training diet

What are you trying to do?

Increase overall weight, particularly muscle mass
Need to participate in a strength training plan that facilitates muscle growth, eat more calories

Keep overall weight the same but increase muscle, decrease fat mass
More cardio, strength training for muscle growth, modest diet changes

Decrease overall weight while increasing muscle mass
Much more cardio, strength training for muscle endurance and toning


Sleep
Adults need 7-9 hours
“Athletes who get more sleep outperform those who get less sleep”
Hydrate
Mental and physical fatigue is a sign you are dehydrated
How can I get more energy??
Performance Diet
Eat Clean Eat Often
Control Stress

What to consider when evaluating a supplement

- What am I going to take? What are the ingredients?
  - *Are the ingredients correct?*
  - *Are the ingredients unnecessary?*
  - *Just because you don't know what an ingredient is does not mean it is harmless*
  - *Proprietary Blend is an overused term, aka for contaminated*
  - *Some ingredients may be hard to identify.*
- What does the label say I should take? Is this correct?
  - *Take with food, on an empty stomach, before a workout?*
  - *Is the dose 1 or 2 pills a day, are both pills at once or split 1 in the am, 1 in the pm*
  - *Just because the label says to take a certain amount*

Calcium…Not that simple

- Don’t take more than 600 mg at a dose
  - don’t absorb more than that
- Best taken with Vit D in the same pill
- Calcium Citrate vs Carbonate
- Take with food
- Don’t take calcium with MVI or iron

Caffeine is the only name for Caffeine

- Guarana
- Green Tea
- Yerba Mate
- Theobroma Cacao
- Theobromine
- Kola Nut
- Theophyllin
- Arabica
- Yaupon Holly

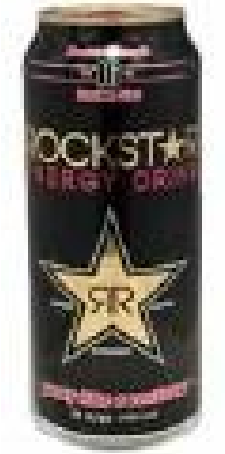
Caffeine Amounts

Cappuccino – 8 oz	75 mg	AMP – 16 oz	142 mg
Starbucks – 8 oz	180 mg	Monster – 16 oz	160 mg
Coffee – 8 oz	85-100 mg	Red Bull – 8.3 oz	80 mg
Espresso – 1 oz	75 mg	Redline – 8 oz	250 mg
Green tea – 6 oz	30 mg	Rockstar – 16 oz	160 mg
Hydroxycut	200 mg	NOS – 22 oz	343 mg
NoDoz Max	200 mg	Redline – 8 oz	250 mg
Dr. Pepper – 12 oz	41 mg	5 hour energy	~200 mg
Mtn Dew – 12 oz	54 mg	6 hour power	~200 mg
Big Red – 12 oz	34 mg	Vault – 12 oz	70 mg

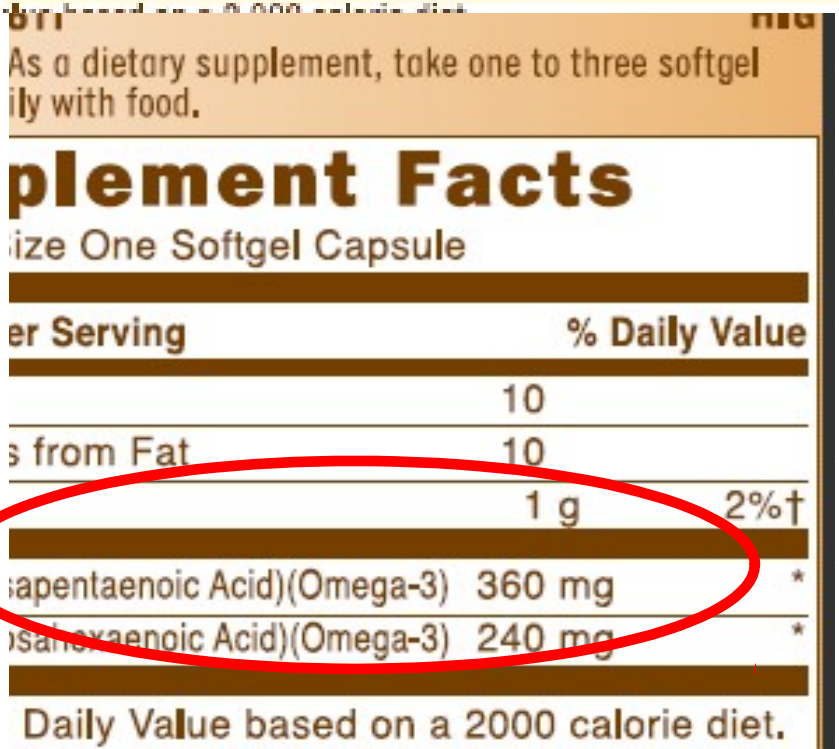
http://www.energyfiend.com/the-caffeine-database

How much is too much?

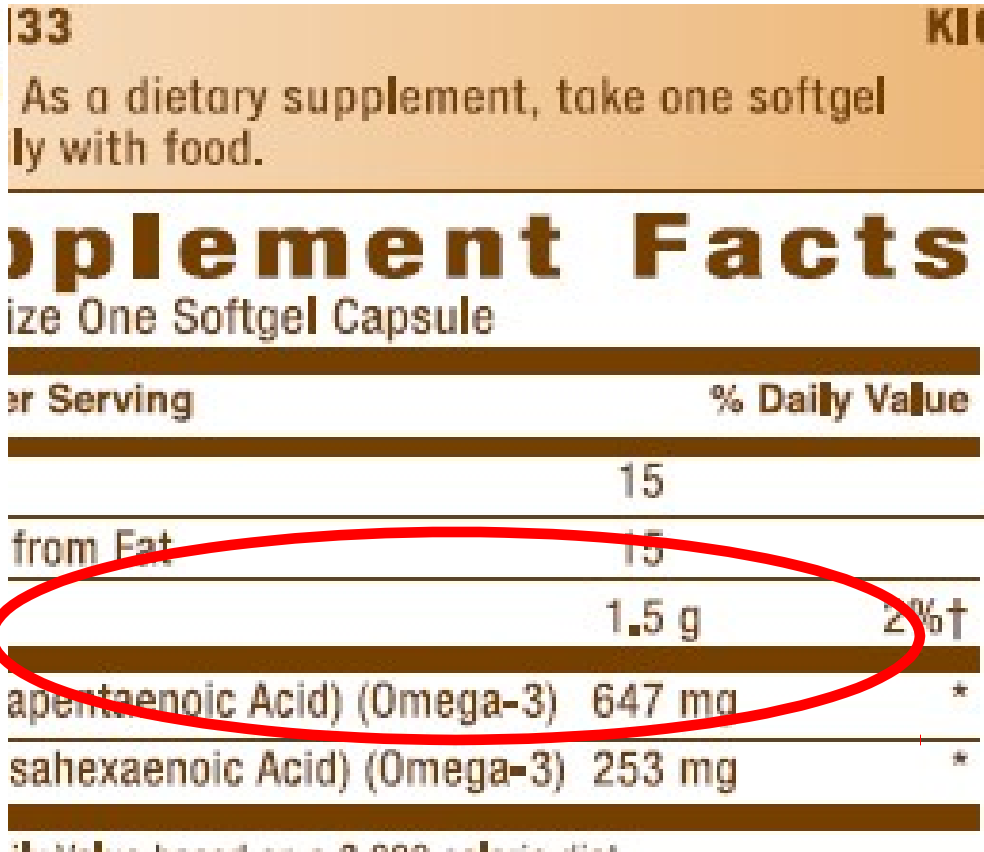
- Avoid taking over 400 mg/day
- Dangerous when combined with other stimulants or at too high a dose (>300 mg)
- 2 g can result in hospitalization especially when taken with some antidepressants
- Lethal dose = 150-200 mg/kg or 70-90 mg/pound
- Only need 25-50 mg to get a jolt
- 100-300 mg as an ergogenic aid



If you are tired, caffeine will not help, it will just mask the fatigue and you may still doze off.



Fish Oil
EPA: 300-600 mg
DHA: 200-400 mg



Creatine

- Over 200 studies with 70% showing benefits
- Creatine supplementation improves performance in repetitive, short-term, high-intensity exercise
- Increase muscle strength, size, and power
- Increase in lean body mass
- Little research on endurance sports
- Greater benefit in younger, untrained athletes

Creatine Side Effects

- 1-2 kg weight gain from water and/or muscle
- GI distress, nausea, muscle cramping, diarrhea in some
- Some people can be considered “non-responders”

Myths

Dehydration/Cramps

Impaired thermoregulation

Decreased performance

Which Creatine should I buy??

- AMP Creatine
- Cell Mass
- CE2 Hi-DEF
- Cell Tech
- Creakic
- Size On
- Anabolic Switch
- Creatine Monohydrate
- Con Cret
- Kre-Alkalyn
- Micronized Creatine
- CRE 02
- 6 Star Muscle Creatine
- Creatine Ethyl Ester
- Animal Pump
- Storm

Serving Size 1 pack(s)
Servings Per Container 30

Amount Per Serving		**% DV**
Vitamin C (as Ascorbic Acid)	60.00 mg	100%
Selenium (as Selenium Selenate)	100.00 mcg	143%
Foundation Creatine Matrix	3000.00 mg	**
NO Blast Complex	2000.00 mg	**
Energy Rush Complex**	500.00 mg	**
Antioxidant Complex	700.00 mg	**
Green Tea Extract (standardized for 45% EGCG)		**
K-R-ALA (alpha lipoic acid)		**
NAC (N-acetyl cysteine)		**
Grapeseed Extract (standardized for 95% polyphenols)		**
Pump Transport Complex	1000.00 mg	**

** Daily Value (DV) not established

Taking Creatine

- Creatine Monohydrate ONLY
- 5 g/day taken with 30 g carbohydrate
- 10 g/day if weight is >290 pounds
- Don’t take w/ caffeine
- Don’t forget to train

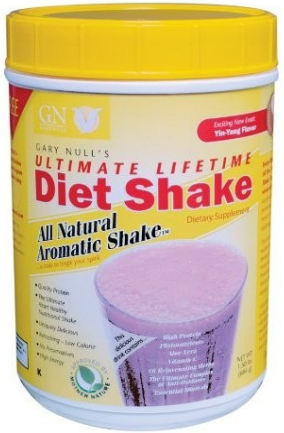
Phosphagen Elite

- Carbohydrate: 34 g
- Creatine Monohydrate: 5.25 g
- Taurine: 1 g
- B Alanine: 1.6 g

What to consider when evaluating a supplement

- What is the risk(s), if any, of taking the supplement?
  - *Will it raise blood pressure or heart rate, does it interfere with blood clotting, does it cause mood swings?*
  - *If you are deployed, these potential side effects are critical*
  - *Do I already get this nutrient/ingredient someplace else? Overdose?*
- Does this supplement claim to do what I want and what are the claims based on?
  - *Most claims are not based on scientific research, but theory*
  - *Long term effects are rarely studied either*
  - *Look at the adds, claims, and testimonials as fiction*

Nutrition guru Gary Null was almost killed by eating his own dietary supplement



- Gary Null's Ultimate Power Meal
- Elevated levels of Vitamin D in his system
- Ultimate Power Meal had 1,000 times the amount of Vitamin D than the label claimed
- Instead of ingesting 2,000 IU of Vitamin D daily, he was ingesting 2 million IU, the suit says
- Most doctors recommend 1,000 IU a day

- NYPost.com; 28 April 2010

Nitric Oxide…is it “Magic?”

- What is N.O.?
  - NO is a gas produced in the body by L-Arginine (an amino acid) and enzymes
- What is the main ingredient in N.O. products?
  - Arginine and “enzymes”
  - Arginine is found in almost all foods
  - Body needs more when “stressed”
- Why would I take a N.O. product?
  - N.O. is *supposed* to increase vasodilation and blood flow and this is supposed to help increase growth of muscles, improve

N.O. Claims

- Increase training energy, focus, endurance, strength, intensity, pumps, and size
- Improves blood flow and delivery of oxygen and nutrients to muscle tissue
- Helps treat erectile dyfunction
- What type of athlete is this for

N.O. Products

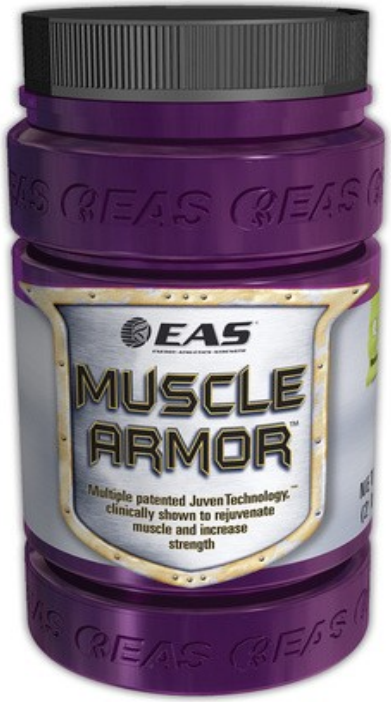
- MRI NO2 Black
- Muscle Tech naNOx9
- Muscle Tech naNO Vapor
- MRI NO2 Platinum
- MRI Pro NOS
- BSN Nitrix
- BSN NO Xplode
- GNC Men’s Arginmax
- Muscle Asylum Project, Altered State Vaso-Reactive NO
- GNC L-Arginine 1000
- CytoSport Fast Twitch Purple
- GNC Pro Performance Ultimate Thermo Pump
- VPX NO-Shotgun

There are more

N.O. Concerns

- Keep intake to 3-9 g/day
- Certain ingredients may interfere with blood clotting
- Arginine can exacerbate ulcers &/or heartburn
- Possible diarrhea and nausea may result (>9g)
- Don’t take if you have a history of depression, anxiety, hyper or hypotension
- Supplementing Arginine can actually interfere with your body’s natural GH production
- If you feel “weird” after taking it, stop
- Many suggest assessing a “tolerance” level first
- Many recommend stopping for 4 weeks after 12 weeks of use
- Be careful with combining products, although some products suggest you “stack” this might not be safe

Muscle Armor Juven Technology



- Arginine – 7 g & Glutamine – 7 g
  - Conditionally essential under periods of stress or intense training
  - Mitigate effects of overtraining
- HMB: hydroxy-methylbuturate – 1.2 g
  - Prevent loss of protein, induce protein synthesis
- Taurine – 3 g

What to consider when evaluating a supplement

- How much does it cost? Is it worth it?
  - *Keep track of how much you are spending on supplements and if the money would be better spent on new wheels for your bike or better running shoes*

- How long do I plan on taking it? How long does it recommend?
  - *Calcium or a multivitamin is ok to take forever*
  - *Maxx Trim…probably not*

- Is it safe to take?
  - *http://www.fda.gov/medwatch/index.html*

- Does it interact with prescribed medications?
  - *Such as birth control, antidepressants, blood*

Fat Burners - Appetite Suppressants Metabolic Boosters - Weight Loss Aids

- Lean Shake
- Burn 60
- Redline
- Acai
- Diet Fuel
- Extreme Energy
- Stacker 2 & 3
- Metabolift
- Thermo DynamX
- Hydroxycut
- Slim quick
- Lipo 6
- Recreate
- Atro-Phex
- Therma Pro
- Ripped Fuel
- Fahrenheit
- Xenadrine NRG
- Arson
- Alli

Safety Guidelines

- Do not take with energy drinks (e.g. Red Bull, Monster) or coffee (can result in an acute caffeine overdose).
- Have your blood pressure checked before starting to use the product and at least once a month thereafter.
- Contain multiple ingredients that may interact with medications or health conditions.
- If your job puts you at high risk for injury (you convoy frequently, go on patrols, etc.) these products may not be for you. They decrease your bloods ability to clot which can cause you to lose a lot more blood if you are wounded.

Bottom Line

Don’t take for more than a couple months

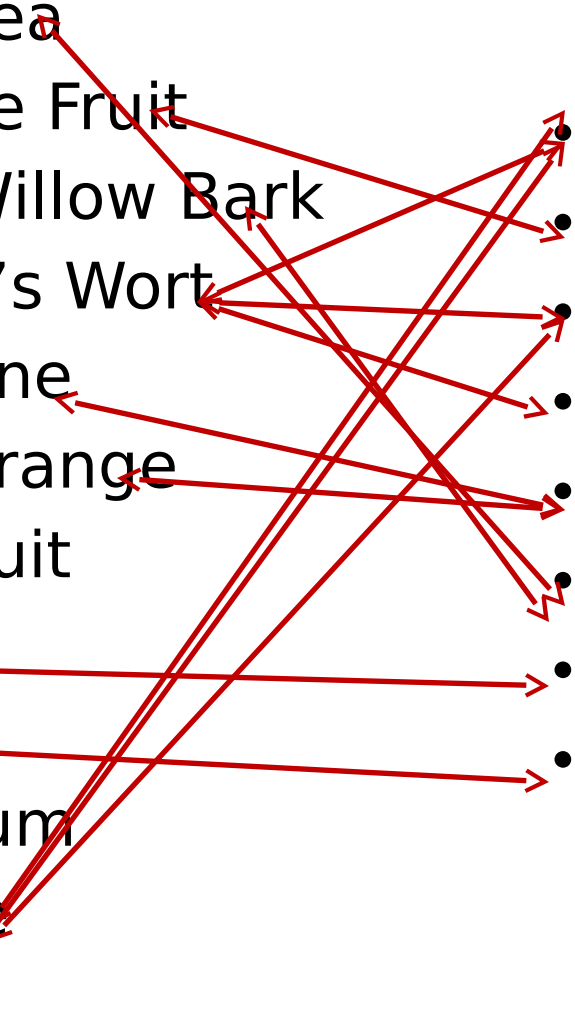
Long term weight loss requires long term changes in diet and exercise

Natural ≠ Safe

Legal ≠ Safe

Ingredients that interact with some medical conditions or medications

- Green Tea
- Cayenne Fruit
- White Willow Bark
- St. John’s Wort
- Yohimbine
- Bitter Orange
- Grapefruit
- Guggul
- Ginger
- Chromium
- Caffeine
- 5-HTP



- Antidepressants
- Heartburn
- Antianxiety
- Contraceptives
- Blood pressure
- Blood clotting (114)
- Thyroid
- Morphine

Problems With Supplements

- Poorly regulated
- Potential contamination
- “Natural” does not equal safe
- “Legal” does not equal safe either
- Don’t always contain what the bottle says
- Not tested or approved by the FDA
- Most evidence for any benefits is anecdotal

The Government's role

- The government does NOT require supplements to be tested to prove they work nor do they require them be safe

- On every label: *"These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease."*

- Even FDA Approved drugs could be perfectly safe and effective for one person and harmful for another.

- The problem with taking supplements is that there is not a health care provider screening you before you

Ephedra

- Banned from market sales in April 2004
- High risk of heart attack, stroke, death
  - 20 Active duty deaths as of 2001
- Ma Huang is the herbal form

- Bitter Orange is the “new” ephedra
  - Aka citrus aurantium or synephrine
  - Stimulant, appetite suppresant
  - Little evidence it is any safer than ephedra

Hydroxycut Recall (May 2009)

- Liver related injury, liver failure, elevated liver enzymes, kidney failure, seizures, and death
- FDA does not know exactly what ingredients caused the damage
- New version of Hydroxycut is available… not really sure what the difference is except a better warning label

- Hydroxycut Regular Rapid Release Caplets
- Hydroxycut Caffeine-Free Rapid Release Caplets
- Hydroxycut Hardcore Liquid Capsules
- Hydroxycut Max Liquid Capsules
- Hydroxycut Regular Drink Packets
- Hydroxycut Caffeine-Free Drink Packets
- Hydroxycut Hardcore Drink Packets (Ignition Stix)
- Hydroxycut Max Drink Packets
- Hydroxycut Liquid Shots
- Hydroxycut Hardcore RTDs (Ready-to-Drink)
- Hydroxycut Max Aqua Shed
- Hydroxycut 24
- Hydroxycut Carb Control
- Hydroxycut Natural

Tainted Weight Loss Supplements March 2009

- Contained an undeclared amount of prescription ingredients
  - Sibutramine (Meridia weight loss drug)
  - Fenproporex (amphetamine stimulant)
  - Fluoxetine (prozac)
  - Bumetanide (diuretic)
  - Furosemide (lasix)
  - Phenytoin (antiseizure drug)
  - Rimonabant (Zimulti, European drug)
  - Cetilistat (experimental obesity drug)
  - Phenolphthalein (laxative – non GRAS)

2 Day Diet – sibutramine
2 Day Diet Slim Advance – sibutramine
2x Powerful Slimming – sibutramine
3 Day Diet – sibutramine
3 Days Fit – sibutramine
3x Slimming Power – sibutramine, phenytoin
5x Imelda Perfect Slimming – sibutramine
7 Day Herbal Slim – sibutramine
7 Days Diet – sibutramine
7 Diet – sibutramine
7 Diet Day/Night Formula – sibutramine
8 Factor Diet – sibutramine, phenolphthalein
Eight Factor Diet – sibutramine
21 Double Slim – sibutramine
24 Hours Diet – sibutramine, phenolphthalein
999 Fitness Essence – sibutramine
BioEmagrecim, sample 1 – fenproporex
BioEmagrecim, sample 2 – fluoxetine, furosemide
Body Shaping – sibutramine
Body Slimming – sibutramine
Cosmo Slim – sibutramine
Extrim Plus – sibutramine, phenytoin
Extrim Plus 24 Hour Reburn – sibutramine
Fasting Diet – sibutramine
Fatloss Slimming – sibutramine, phenolphthalein
GMP – sibutramine
Herbal Xenicol – cetilistat
Imelda Fat Reducer – sibutramine
Imelda Perfect Slim – sibutramine, phenolphthalein
JM Fat Reducer – sibutramine
Lida DaiDaihua – sibutramine
Meili – sibutramine
Meizitang – sibutramine
Miaozi MeiMiaoQianZiJiaoNang – sibutramine
Miaozi Slim Capsules – sibutramine
Natural Model – sibutramine

Perfect Slim – sibutramine
Perfect Slim 5x – sibutramine, phenolphthalein
Perfect Slim Up – sibutramine
Phyto Shape – rimonabant
Powerful Slim – sibutramine
ProSlim Plus – sibutramine
Reduce Weihgt – sibutramine
Royal Slimming Formula – sibutramine, phenolphthalein
Sana Plus – sibutramine
Slim 3 in 1 – sibutramine
Slim 3 in 1 Extra Slim Formula – sibutramine
Slim 3 in 1 Extra Slim Waist Formula – sibutramine
Slim 3 in 1 M18 Royal Diet – sibutramine
Slim 3 in 1 Slim Formula – sibutramine
Slim Burn – sibutramine
Slim Express 4 in 1 – sibutramine
Slim Express 360 – sibutramine
Slim Fast – sibutramine
Slim Tech – sibutramine
Slim Up - sibutramine
Slim Waist Formula – sibutramine
Slim Waistline – sibutramine
Slimbionic- sibutramine
Sliminate – sibutramine
Slimming Formula – sibutramine
Somotrim – sibutramine
Starcaps – bumetanide
Super Fat Burner – sibutramine
Superslim – sibutramine, phenolphthalein
Super Slimming – sibutramine
Trim 2 Plus – sibutramine
Triple Slim – sibutramine
Venom Hyperdrive 3.0 – sibutramine
Waist Strength Formula – sibutramine
Xsvelten – sibutramine
Zhen de Shou – sibutramine, phenolphthalein

Undisclosed Steroid Recall November 2009

- www.Bodybuilding.com 65 supplements that may contain steriods
  - Superdrol, Madol, Tren, Androstenedione, and/or Turinabol
- Liver injury, shrinkage of testes, infertility, short stature, male breast enlargement, masculinization of women, heart attack, stroke, death

- 4Ever Fit D-Drol
- Advanced Muscle Science Dienedrone
- Advanced Muscle Science Liquidrone UTT
- Anabolic Xtreme Hyperdrol X2
- APS (aka Advanced Muscle Science) Mastavol
- APS (aka Advanced Muscle Science) Revamp
- APS (aka Advanced Muscle Science) Ultra Mass Stack
- APS (aka Advanced Muscle Science) Ripped Stack
- Better Body Sports Finadex
- Black China Labs Straight Drol
- Black China Labs Straight Phlexed
- Body Conditioning Solutions TestraFLEX
- Bjorklund Methyldrostanolone
- BOSC Enterprises Epi-Tren
- BOSC Enterprises Magna Drol
- Chaparral Labs Epivol
- Chaparral Labs Pheravol-V
- Competitive Edge Labs M-Drol
- Competitive Edge Labs P-Plex
- Competitive Edge Labs X-tren
- Diabolic Labs Epio-Plex
- Diabolic Labs Finabolic 50
- Diabolic Labs Revenge
- Ergopharm 6-OXO
- Ergopharm 6-OXO Extreme
- EST (aka Engineered Sports Technology) MethAnstance
- Extreme Labs Susto-Test Depot
- Fizogen ON Cycle II Hardcore
- G.E.T/ (Genetic Edge Technologies) SUS-500
- G.E.T/ (Genetic Edge Technologies) Tren-250
- Hardcore Formulations T-Roid

- I Force Nutrition 1,4 AD Bold 200
- I Force Dymethazine/Reversitol Combo Pack
- I Force Reversitol
- I Force Nutrition 17a PheraFLEX
- I Force Nutrition Dymethazine
- I Force Nutrition Methadrol
- IDS (aka Innovative Delivery Systems) Bromodrol
- IDS (aka Innovative Delivery Systems) Grow Tabs TR
- IDS (aka Innovative Delivery Systems) Mass Tabs
- IDS (aka Innovative Delivery Systems) Oxodrol Pro
- IDS (aka Innovative Delivery Systems) Ripped Tabs TR
- IDS (aka Innovative Delivery Systems) Rapid Release
- Ripped Tabs
- Kilo Sports Massdrol
- Kilo Sports Phera-Mass
- Kilo Sports Trenadrol
- Monster Caps Monster Caps
- Myogenix Spawn
- Nutra Coastal D-Stianozol
- Nutra Coastal H-Drol
- Nutra Coastal MDIT
- Nutra Coastal S-Drol
- Nutra Coastal Trena
- Performance Anabolics Methastadrol
- Performance Anabolics Tri-Methyl X
- Purus Labs E-pol Inslinsified
- Purus Labs Nasty MassRage RV2
- Rage RV3
- Rage RV4
- Rage RV5
- Redefine Nutrition Finaflex 550-XD
- Redefine Nutrition Finaflex Ripped
- Transform Supplements Forged Extreme Mass
- Transform Supplements Forged Lean Mass

Carcinogenic Chromium

- Tests by Consumerlab.com
- Up to 26.4 mcg of hexavalent chromium, 220 times the proposed limit of .12 mcg per day
- Pills: Dexatrim, Green Tea Fat Burner, Hydroxycut, Mega-T Green Tea, Metabolife, MetaboSpeed, Orovo, Slimquick, Stacker3, and Xenadrine
- Manufacturers: Blaine Pharmaceuticals, FoodScience of Vermont, GNC, Natural Factors, Nature’s Bounty, PhytoPharmica, Puritan’s Pride, and Vitamin World

Oliveira suspended for illegal supplement: US rider gets two-year ban for doping positive

The US Anti-doping Agency (USADA) announced a two-year suspension for Flavia Oliveira, a California resident who tested positive for oxilofrine, an illegal stimulant, while racing with the Italian professional team SC Michela Fanini at the Giro del Trentino Donne in June, 2009.

The positive test was found to be the result of a weight-loss supplement called Hyperdrive 3.0. While athletes who test positive due to tainted supplements can receive reduced suspensions under WADA rules, arbitrators placed "significant fault" on Oliveira since the ingredient Mythelsynephrine, the chemical equivalent of oxilofrine, is listed as the supplement's first ingredient on the label.

"Oliveira's two year period of ineligibility began July 19, 2009, the day her sample was collected. As a result of the doping violation, Oliveira has also been disqualified from all competitive results achieved at and subsequent to the Giro del Trentino Donne, including forfeiture of any medals, points, and prizes," the press release stated.

USADA recently began an initiative called "Supplement Safety Now" in partnership with the US Olympic Committee and major professional sports organizations "as an effort to end the dangerous and unscrupulous practices of some manufacturers within the nutritional supplement industry."
The effort is aimed at lobbying the US Congress regulate over-the-counter supplements to ensure they are safe and free of dangerous steroids and other drugs.

NCAA’s Warning

- Before consuming any nutritional/dietary supplement product, review the product and its label with your athletics department staff!
- Dietary supplements are not well regulated and may cause a positive drug test result.
- Student-athletes have tested positive and lost their eligibility using dietary supplements.
- Many dietary supplements are contaminated with banned drugs not listed on the label.
- Any product containing a dietary supplement ingredient is taken at your own risk.

WADA Prohibited List

- AAS (anabolic androgenic steroids) or any anabolic agent
- a. Exogenous* AAS, including:
- 1-androstendiol; 1-androstendione; bolandiol; bolasterone; boldenone; boldione; calusterone; clostebol; danazol; dehydrochlormethyltestosterone; desoxymethyltestosterone; drostanolone; ethylestrenol; fluoxymesterone; formebolone; furazabol; gestrinone; 4-hydroxytestosterone; mestanolone; mesterolone; metenolone; methandienone; methandriol; methasterone; methyldienolone; methyl-1-testosterone; methylnortestosterone; methyltrienolone; methyltestosterone; mibolerone; nandrolone; 19-norandrostenedione; norboletone; norclostebol; norethandrolone; oxabolone; oxandrolone; oxymesterone; oxymetholone; prostanozol; quinbolone; stanozolol; stenbolone; 1-testosterone; tetrahydrogestrinone; trenbolone

WADA Prohibited List

- AAS (anabolic androgenic steroids) or any anabolic agent
- b. Endogenous** AAS when administered exogenously:
- androstenediol; androstenedione; dihydrotestosterone; prasterone; DHEA; testosterone; 5α-androstane-3α,17α-diol; 5α-androstane-3α,17β-diol; 5α-androstane-3β,17α-diol; 5α-androstane-3β,17β-diol; androst-4-ene-3α,17α-diol; androst-4-ene-3α,17β-diol; androst-4-ene-3β,17α-diol; androst-5-ene-3α,17α-diol; androst-5-ene-3α,17β-diol; androst-5-ene-3β,17α-diol; 4-androstenediol; 5-androstenedione; epi-dihydrotestosterone; epitestosterone; 3α-hydroxy-5α-androstan-17-one; 3β-hydroxy-5α-androstan-17-one; 19-norandrosterone; 19-noretiocholanolone
- Other Anabolic Agents, including but not limited to:
- Clenbuterol, selective androgen receptor modulators (SARMs), tibolone, zeranol, zilpaterol.

WADA Prohibited List

- Non-Specified Stimulants:
- Adrafinil; amfepramone; amiphenazole; amphetamine; amphetaminil; benzphetamine; benzylpiperazine; bromantan; clobenzorex; cocaine; cropropamide; crotetamide; dimethylamphetamine; etilamphetamine; famprofazone; fencamine; fenetylline; fenfluramine; fenproporex; furfenorex; mefenorex; mephentermine; mesocarb; methamphetamine(D-); methylenedioxyamphetamine; methylenedioxymethamphetamine; p-methylamphetamine; modafinil; norfenfluramine; phendimetrazine; phenmetrazine; phentermine; 4-phenylpiracetam (carphedon); prolintane.
- Specified Stimulants (examples):
- Adrenaline**; cathine***; ephedrine****; etamivan; etilefrine; fenbutrazate; fencamfamin; heptaminol; isometheptene; levmetamphetamine; meclofenoxate; methylephedrine****; methylphenidate; nikethamide; norfenefrine; octopamine; oxilofrine; parahydroxyamphetamine; pemoline; pentetrazol; phenpromethamine; propylhexedrine; selegiline; sibutramine; strychnine; tuaminoheptane

- Performance Enhancing Substances

1. Androstanediol
2. Androstanedione
3. Androstenediol
4. Androstenedione
5. Bolasterone
6. Boldenone
7. Boldione
8. Calusterone
9. Clenbuterol
10. Clostebol
11. Danazol
12. Dehydrochloro-methyltestosterone
13. Desoxy-methyltestosterone
14. Δ1-dihydrotestosterone
15. 4-dihydrotestosterone
16. Drostanolone
17. Ethylestrenol
18. Fluoxymesterone
19. Formebolone
20. Furazabol
21. 13a-ethyl-17a-hydroxygon-4-en-3-one
22. Gestrinone
23. 4-Hydroxytestosterone
24. 4-hydroxy-19-nortestosterone
25. Mestanolone
26. Mesterolone
27. Methandienone

- Performance Enhancing Substances

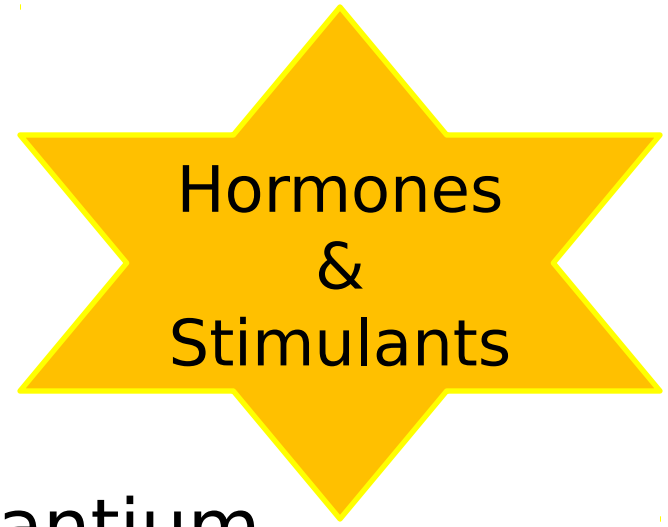
28. Methandriol
29. Methenolone
30. Methyltestosterone
31. Mibolerone
32. 17a-methyl-Δ1-dihydrotestosterone
33. Nandrolone
34. Norandrostenediol
35. Norandrostenedione
36. Norbolethone
37. Norclostebol
38. Norethandrolone
39. Noretiocholanolone
40. Oxabolone
41. Oxandrolone
42. Oxymesterone
43. Oxymetholone
44. Prostanozol
45. Quinbolone
46. Stanozolol
47. Stenbolone
48. Testolactone
49. Testosterone
50. Tetrahydrogestrinone
51. Trenbolone

- Performance Enhancing Substances

52. Any salt, ester or ether of a drug or substance listed above
53. Human Growth Hormone ("HGH")
54. Insulin-like Growth Factor (IGF-1), including all isomers of IGF-1 sometimes referred to as Mechano Growth Factors
55. Gonadotrophins (including LH and hCG)
56. Aromatase Inhibitors, including Anastrazole, Lestrozole, Aminogluthemide, Exemestane, Formestane, and Testolactone
57. Selective Estrogen Receptor Modulators, including Raloxifene, Tamoxifen and Toremifene
58. Other Anti-estrogens, including Clomiphene, Cyclophenil, and Fulvestrant

Banned Substances/Contaminates found in undisclosed Supplements

- Androstenediol
- Androstenedione
- Norandrostenediol
- Norandrostenedione
- DHEA
- Caffeine
- Synephrine / Citrus aurantium
- Ephedrine (ma huang)



What does the Army test for?

- Marijuana
- Cocaine
- Amphetamines
- LSD
- Opiates (including morphine and heroin)
- Barbiturates
- PCP
- Steroids – per CDR Request

There is NO complete list of banned drugs/substances

Be a smart supplement shopper and utilize your resources

trisha.brooke.stavinoha@us.army.mil

What about GNC?

Thank you for contacting Customer Service at www.gnc.com.

"Quality first" is a fundamental principle that guides every aspect of
GNC including our constant attention to new research and scientific
discoveries. Each year, GNC researches and develops leading edge
products and markets them as quickly as possible. Staying on the cutting
edge of nutritional developments is a responsibility we take seriously.
**In fact, we conduct many of our own studies on product ingredients to
authenticate a particular claim or benefit before passing it on to the
customer.** You may also call Customer Service at 1-877-462-4700
anytime

USP: U.S. Pharmacopeia
NSF: www.NSF.org
Informed Choice
http://inbounds-athletics.com

- Sets standard for quality, purity, strength, and consistency
- What is on the label is in the bottle
- Does not contain a harmful level of contaminants
- Supplement will break down and release ingredients in the body
- Made under good manufacturing practices

POSSIBILITIES

With Focus, Dedication and Steroids, Men Can Achieve Impossible Dreams.
Like Breaking a World Record. Or Growing Their Own Breasts.

www.despair.com

Anabolic Androgenic Steroids

- Anabolic: muscle growth
- Synthetic
- Sure, they work
  - Increase testosterone production, enhance athletic performance, increase energy & strength
- But they are illegal
- Because they are not safe

http://exrx.net/Steroids.html

Side effects

- LVH: Left ventricular hypertrophy
- Hypertension
- Increased cholesterol
- Decreased HDL cholesterol (good one)
- Mental status changes
- Hormone issues: can decrease natural testosterone production
- Impotence, shrunken testicles, breast development in men, liver problems, increased cancer risk (breast, pancreatic, prostate)

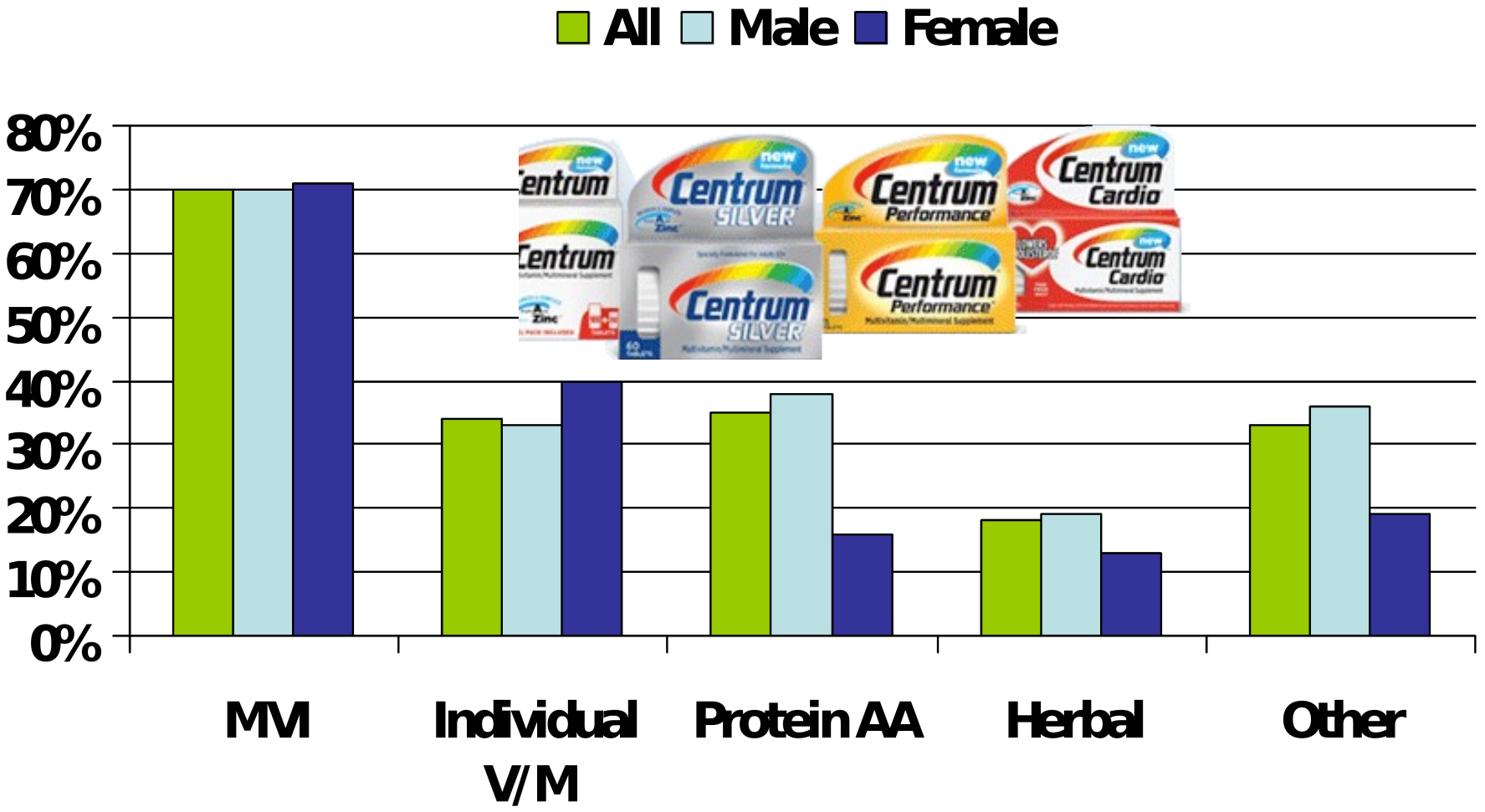
Androstenedione

- Steroid hormone used to make testosterone and estrogen
- Reported dose used = 200 mg/day
- Dose on most supplements cannot be verified
- In 2004, FDA told manufacturers to stop distribution due to safety concerns
- Considered a banned substance

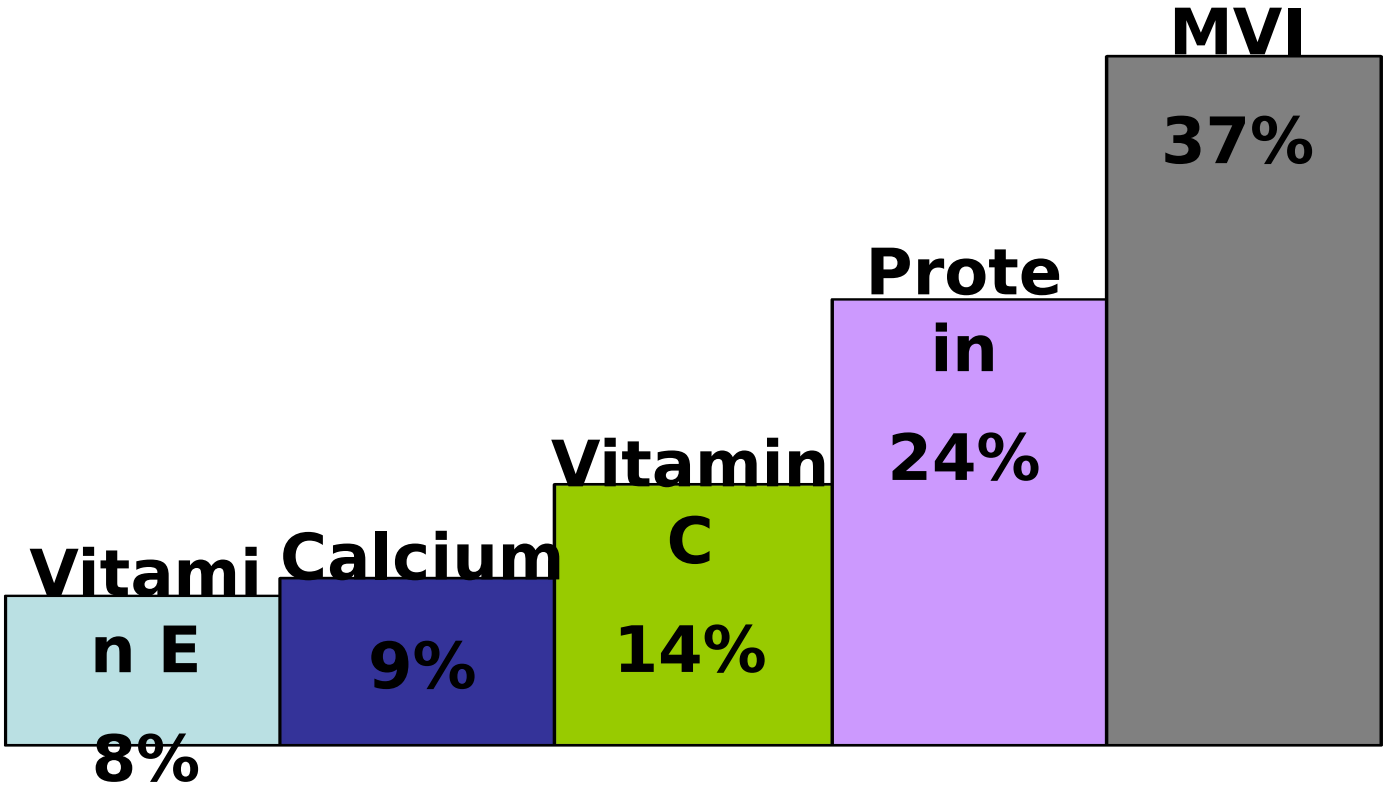
Testosterone “Boosters”

- T-Bomb II, Animal Stak, Muscle Jack
- Tribulus Terrestris, DHEA
- Possibly safe, possibly ineffective
- MANY supplements claiming to be “steroid free” do in fact contain steroids
  - 19% in the USA in one study
  - 26% in the Netherlands
- There is no such thing as a “legal” steriod
- What are the long term effects?

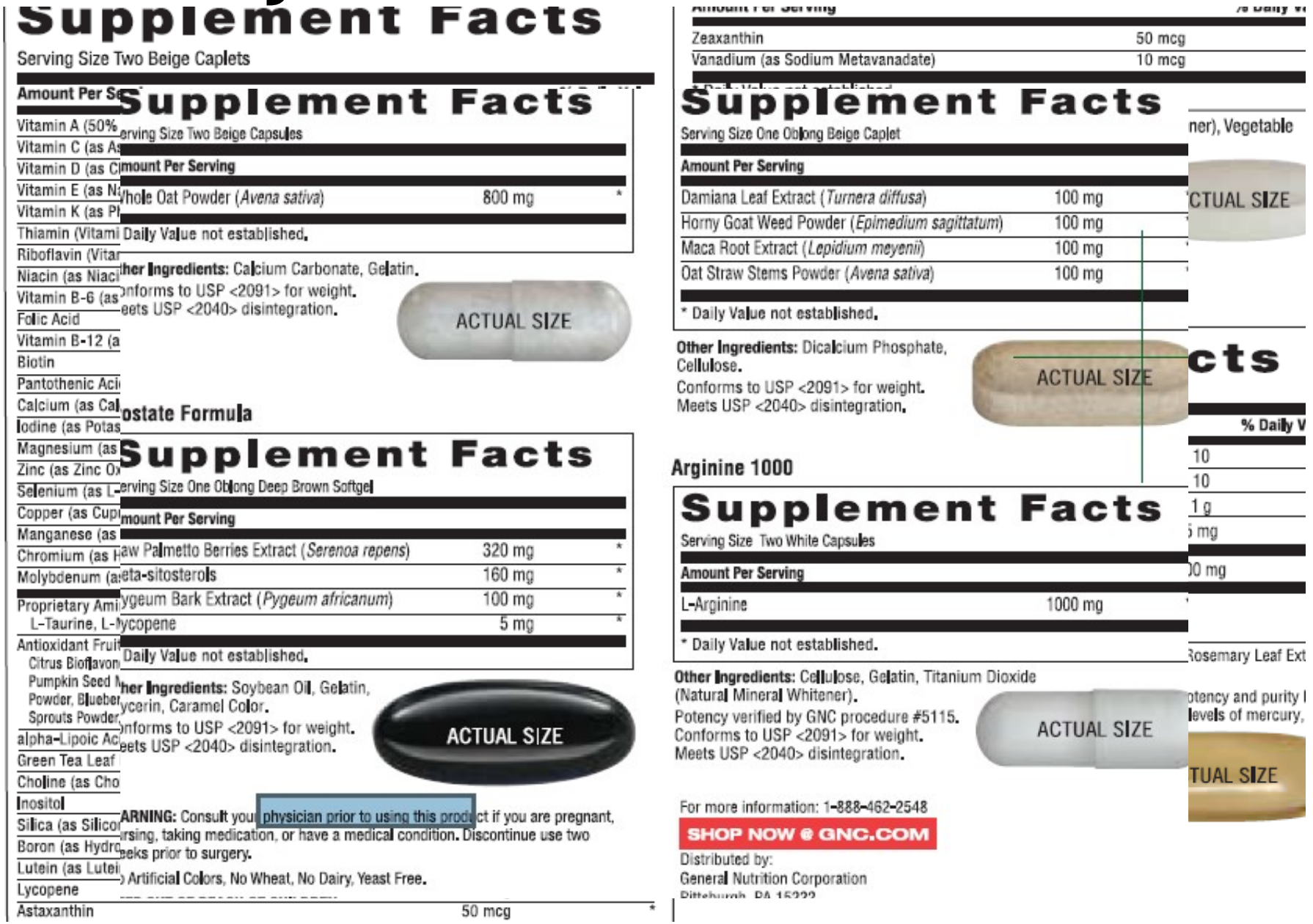
What are Soldiers Taking the Most?



Top 5 DS Overall



Just a Multivitamin



Supplement Facts

Serving Size Two Beige Caplets

Amount Per Se

Vitamin A (50%
Vitamin C (as As
Vitamin D (as Ci
Vitamin E (as Na
Vitamin K (as Ph
Thiamin (Vitami
Riboflavin (Vitar
Niacin (as Niaci
Vitamin B-6 (as
Folic Acid
Vitamin B-12 (a
Biotin
Pantothenic Aci
Calcium (as Cal
Iodine (as Potas
Magnesium (as
Zinc (as Zinc Ox
Selenium (as L-
Copper (as Cupr
Manganese (as
Chromium (as H
Molybdenum (as

Proprietary Ami
L-Taurine, L-
Antioxidant Fruit
Citrus Bioflavon
Pumpkin Seed M
Powder, Blueber
Sprouts Powder
alpha-Lipoic Ac
Green Tea Leaf
Choline (as Cho
Inositol
Silica (as Silicon
Boron (as Hydro
Lutein (as Lutei
Lycopene
Astaxanthin 50 mcg *

Supplement Facts

erving Size Two Beige Capsules

mount Per Serving

hole Oat Powder (*Avena sativa*) 800 mg *

Daily Value not established.

her Ingredients: Calcium Carbonate, Gelatin.
nforms to USP <2091> for weight.
eets USP <2040> disintegration.

ACTUAL SIZE

ostate Formula

Supplement Facts

erving Size One Oblong Deep Brown Softgel

mount Per Serving

aw Palmetto Berries Extract (*Serenoa repens*) 320 mg *
eta-sitosterols 160 mg *
ygeum Bark Extract (*Pygeum africanum*) 100 mg *
ycopene 5 mg *

Daily Value not established.

her Ingredients: Soybean Oil, Gelatin,
ycerin, Caramel Color.
nforms to USP <2091> for weight.
eets USP <2040> disintegration.

ACTUAL SIZE

ARNING: Consult your physician prior to using this product if you are pregnant,
rsing, taking medication, or have a medical condition. Discontinue use two
eeks prior to surgery.
Artificial Colors, No Wheat, No Dairy, Yeast Free.

Zeaxanthin 50 mcg
Vanadium (as Sodium Metavanadate) 10 mcg

Supplement Facts

Serving Size One Oblong Beige Caplet

Amount Per Serving

Damiana Leaf Extract (*Turnera diffusa*)	100 mg	
Horny Goat Weed Powder (*Epimedium sagittatum*)	100 mg	
Maca Root Extract (*Lepidium meyenii*)	100 mg	
Oat Straw Stems Powder (*Avena sativa*)	100 mg	

* Daily Value not established.

Other Ingredients: Dicalcium Phosphate, Cellulose.
Conforms to USP <2091> for weight.
Meets USP <2040> disintegration.

ACTUAL SIZE

ner), Vegetable

CTUAL SIZE

cts

% Daily V

10
10
1 g
5 mg
00 mg

Rosemary Leaf Ext

otency and purity
levels of mercury,

TUAL SIZE

Arginine 1000

Supplement Facts

Serving Size Two White Capsules

Amount Per Serving

L-Arginine 1000 mg

* Daily Value not established.

Other Ingredients: Cellulose, Gelatin, Titanium Dioxide (Natural Mineral Whitener).
Potency verified by GNC procedure #5115.
Conforms to USP <2091> for weight.
Meets USP <2040> disintegration.

ACTUAL SIZE

For more information: 1-888-462-2548
SHOP NOW @ GNC.COM
Distributed by:
General Nutrition Corporation
Pittsburgh, PA 15222

Just a multivitamin...

http://www.centrum.com/
http://www.oneaday.com/

How to be a better athlete?

- Don’t ignore the obvious
- Be skeptical about supplements
- Think long term
- Set clear goals for performance
- Be realistic with your expectations
- Some goals take more work than others… be prepared to work hard
- Don’t expect to meet all your goals in just one year of training, be patient and you will reach your goals

Websites

- http://www.us.army.mil
  - Hooah bodies – self service, my medical
  - Natural medicines comprehensive database
- http://www.consumerlab.com
- http://exrx.net/Steroids.html
- http://eas.com/Products/
- http://www.supplementwatch.com
- http://www.wada-ama.org/
- http://www.hooah4health.com
- http://chppm-www.apgea.army.mil/documents/TGTECHGUID/TG295

AKO ARMY KNOWLEDGE ONLINE

Welcome, Trisha Stavinoha | Create a Site | My Account | Help | Logout

Email | Files | Forums | Groups | IM | Forms | Video | People

Home | My Workspace | Site Map | Favorites | Quick Links | Self Service

Search... | AKO Public | Search

Thursday, 10 July 2008

- Antivirus Services
- Army e-Commerce
- DA Pubs & Forms
- My Benefits
- My Education
- My Family
- My Finance
- My Legal
- My Library
- My Medical
- My Personnel
- My Readiness
- My Reference
- My Security
- My Training
- My Travel
- My Weather

AKO News | Army Wide Announcements | Early Bird Ne

7 Jul 2008 GMT - Mike Krieger Named Army
Lt. Gen. Jeffrey A. Sorenson, the Army's Chief I

2 Jul 2008 GMT - DOD Partners, Join the DK
DOD military service members and government c

2 Jul 2008 GMT - CID Seeking Information in
CID is seeking information into the death of SPC I

on 2 July that Mike Krieger starts Jul... [more]

alid CAC are now eligible to self-regist... [more]

d in Fayetteville, N.C., 21 Jun 08. Touma ... [more]

Visit the AKO News Center for more news

Visit the Career Opportunities page on AKO

Visit the Slick Deals for Service Members page on AKO

Key Links

- myPay at Self Service > My Finance
- Digital Training Management System
- TRICARE Online
- Notice of Privacy Practices

DoD Links

- Defense Knowledge Online
- Joint Knowledge Online
- DoD IA Portal (CAC Required - No CAC? See Access Procedure page)

rt. Do Your Part. Vote!

Army Voting Assistance Program Web Site for all voting resources. Get SF 186 Write-In Absentee Ballot or SF 76 Registration and Absentee Ballot Request - Post Card Application (FPCA) today!

ARMY POST-DEPLOYMENT HEALTH REASSESSMENT

MY WEATHER

View personalized weather

LATEST NOTIFICATIONS

View all notifications (0 new)

NEW IN MY FILES

View all new files

MY PROFESSIONAL DATA

My Medical Readiness Status is GREEN (more)

My DA Photo is VALID (more)

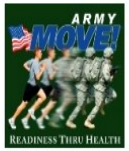
View the status of your family members: My DEERS

View your training status: My Training

View your leader development resources: My Leader Development

ARMY LINKS

Register for one of the Ultimate Warrior Communities below for free online classes from registered dietitians and health promotion experts



Tired? Need more energy?
Begin shedding pounds and improving your health today by joining the **Army *Move!*** program. Start by clicking **here**.

Bulking UP?
HOOAH Bodies has consultation on dietary supplements, body building, endurance training and sports nutrition. Click **here** to begin!

MEDCOM NOW

Office of the Surgeon General
MEDCOM NOW Newsletter

U.S. Army Deployment Maintenance Medication Supply

EXPRESS SCRIPTS

Home
Search
L-ARGININE
Also Known As
Scientific Names
People Use This For
Safety
Effectiveness
Mechanism of Action
Adverse Reactions
Herb Interaction
Drug Interaction
Food Interaction
Lab Test Interaction
Disease Interaction
Dosage
Comments
Print Version
Patient Handout
References
Brand Names
Suggest Changes

L-ARGININE

Quick Links:

Full Monograph
Safety
Effectiveness
Adverse Reactions
Dosage/Administration
Interactions with Drugs
Interactions with Herbs
Interactions with Food
Interactions with Lab Tests
Interactions with Diseases
Also Known As
People Use This For
Mechanism of Action
Editor's Comments
References
Patient Handout

View Products Containing: L-ARGININE

Also Known As:

Arg, Arginine, Arginine Ethyl Ester, Arginine Ethyl Ester Dihydrochloride, Arginine Ethyl Ester HCl, Arginine HCl, Arginine Hydrochloride, Di-Arginine Malate, Di-Arginine Orotate, Di-L-Arginine-L-Malate, DI-Arginine, L-Arginine Ethyl Ester Dichloride, L-Arginine HCl, L-Arginine Hydrochloride, L-Arginine L-Pyroglutamate, L-Arginine Pyroglutamate.

Scientific Name:

2-Amino-5-guanidinopentanoic acid.

People Use This For:

Orally, L-arginine is used for cardiovascular conditions including congestive heart failure (CHF), angina pectoris, hypertension, and coronary artery disease. L-arginine is also used for intermittent claudication, senile dementia, erectile dysfunction, and male infertility. Furthermore, L-arginine is used for prevention of the common cold, interstitial cystitis, cyclosporine nephrotoxicity, pre-eclampsia, improving athletic performance, improving immune function, and preventing necrotizing enterocolitis in premature infants.

In combination with ibuprofen, L-arginine is used orally for migraine headaches, and as an adjunct to chemotherapy in breast cancer. In combination with hydroxymethylbutyrate (HMB) and glutamine, L-arginine is used orally for treating weight loss in people with AIDS. In the perioperative period, to reduce infections, improve wound healing, and shorten recovery time, L-arginine is used orally in combination with RNA and EPA.